

Abstract

The present invention [I] relates to a biodegradable polyester resin composition comprising an aliphatic polyester resin, a polycaprolactone, and inorganic additives, in which the ratio of the aliphatic polyester resin with respect to the polycaprolactone is 100 parts by weight/1-200 parts by weight and, the ratio of total amount of the aliphatic polyester resin and the polycaprolactone with respect to the inorganic additives is 95-50% by weight/5-50% by weight.

The present invention [II] relates to a biodegradable throw-away glove obtained by T-die molding a polyester resin composition in which 1-200 parts by weight of a polycaprolactone is mixed with 100 parts by weight of an aliphatic polyester resin to obtain a film having thickness of 40 μm , and two layers of the film are doubled up to heat-seal into a glove-shape, and circumferential portions are cut off.

The present invention [III] relates to a biodegradable stake molded from a polyester resin composition in which 1-200 parts by weight of a polycaprolactone is mixed with 100 parts by weight of an aliphatic polyester resin, and which may contain fertilizers and/or chemicals at an inside portion thereof.

The present invention [IV] relates to a protecting material for plants in which there is molded into a net-like shape a

polyester resin composition obtained by formulating 1-200 parts by weight of a polycaprolactone and 5-100 parts by weight of talc with 100 parts by weight of an aliphatic polyester resin, and which is wound around a trunk of trees, and prevents an injury eaten by animals.

The present invention [V] relates to a biodegradable tape which comprises molding a lactone resin alone or a lactone-contained resin composition in which the lactone resin is formulated with other biodegradable resins and/or additives for resins, which is excellent in degradability, moldability, and mechanical properties, and which is employed as a tape for wrapping-packing and a pressure sensitive adhesive tape, etc.

The present invention [VI] relates to a biodegradable card characterized by employing as a base material a biodegradable resin composition layer comprising 85-5% by weight of a polylactic acid-based resin (A), 5-50% by weight of an aliphatic polyester resin (B), and 10-45% by weight of a polycaprolactone-based resin (C) (total of the (A)+(B)+(C) is 100% by weight) and, further 5-300 parts by weight of fillers (D) based on 100 parts by weight of the total of the (A)+(B)+(C).

The present invention [VII] relates to a biodegradable laminated film obtained by laminating a biodegradable resin layer with papers, etc., and the biodegradable resin layer is composed of

an aliphatic polyester resin alone which is a succinic acid-1,4-butanediol polyester, a succinic acid-ethyleneglycol polyester, or a succinic acid/adipic acid-1,4-butanediol copolyester, or composed of the aliphatic polyester resin and the polycaprolactone.

The present invention [VIII] relates to a biodegradable laminated film in which there are laminated at least two different kinds of biodegradable resin layers, and relates to a biodegradable film for agriculture.

The present invention [IX] relates to a biodegradable multi-layers film or sheet comprising a layer (A) composed of a biodegradable aliphatic polyester resin composition which contains an aliphatic polyester having not relatively high biodegradability and an aliphatic polyester resin containing a urethane bond, however, which is more excellent in biodegradability than themselves, and a layer (B) composed of a lactone resin alone or a composition of the lactone resin with a biodegradable resin other than the lactone resin, in which the lactone resin is irradiated solely or together with at least one of other constructing components by ionizing radiation.

The present invention [X] is to a biodegradable thin film having a film thickness of 5-25 μm , and which comprises a composition of an aliphatic polyester resin having a specified melt flow rate and melt tension with a polycaprolactone.

The present invention [XI] relates a cushion sheet having great many of discontinuous cells, in which there is employed a biodegradable shrink film including a polycaprolactone irradiated by an ionizing radiation.

The present invention [XII] relates to particle-state products on which there is coated a polycaprolactone irradiated by an ionizing radiation and, particularly, it relates to a coated fertilizer, coated agricultural chemicals, or microcapsule for carbonless copy paper which have a biodegradable thin layer and an excellent storage stability.

The present invention [XIII] relates to particle-state fertilizers on which there is coated a biodegradable coating layer including a biodegradable polylactone.

The present invention [XIV] relates to a biodisintegrable resin composition which comprises a lactone resin having a specified composition, an aliphatic polyester resin, a fatty acid amide, and a thermoplastic resin having a high impact strength and, further, optionally, in which there are added a liquid lubricant, finely-powdered silica, and talc.